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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,655	12/05/2003	Shiuh-An Shieh	11829/10	2795

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EXAMINER	
NGUYEN, TAI T	

ART UNIT	PAPER NUMBER
2632	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/729,655	SHIEH, SHIUH-AN	
	Examiner	Art Unit	
	Tai T. Nguyen	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-19 and 22-56* is/are rejected.

7)☒ Claim(s) *9,20 and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/24/04 & 7/5/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 26-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 26, the step of comparing at least one of: (a) a product based on the first and second parameter readings, (b) a ratio based on the first and second parameter readings and (c) a derivative form of at lease one of the ratio and the product is not clear what reference/threshold to compare with. For instant, the comparing step must have a reference/threshold to compare with the product based on the first and second parameter readings. It appears that the comparing step is not complete.

Regarding claim 43, same problem like claim 26.

Regarding claim 51 recites the limitation "the load sensor" in line 8. There is insufficient antecedent basis for this limitation in the claim. It appears that "controller coupled to the circuit parameter sensor".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-8, 12-19, and 22-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US 6,043,743).

Regarding claims 1 and 23-25, Saito et al. disclose a vehicle occupancy sensing system (figure 4) comprising:

a first electrode connection (E4) and a second electrode connection (E3), where at least one of the electrode connections is a seat back electrode connection (figure 3, col. 9, lines 38-59),

a circuit parameter sensor in the form of a detecting circuit (14) connected with the first electrode connection and the second electrode connection (figure 4, col. 10, lines 48-61); and

a controller (17) coupled to the circuit parameter sensor, the controller operable to obtain a first parameter reading for the first electrode connection and a second parameter reading for the second electrode connection, and operable to determine an occupancy characteristic based on a comparison between a seating pattern and transmission signal obtained from the reception electrodes (col. 12, lines 3-32). Saito et al. discloses the instant claimed invention except for the controller being operable to determine the occupancy characteristic based on a ratio of the first and second parameter readings. Since Saito et al. discloses the controller compares various threshold values TH1 to TH9 with a general expression R(i, j) to determine either the occupancy characteristic is empty, rear facing or front facing (figures 12, col. 12, lines

24-32), it would have been obvious to a person having ordinary skill in the art at the time the invention was made to know that the controller compares the ratio of the first and second parameter readings with the threshold for the purpose of detecting that a child in a child seat is rear facing or front facing in order to signal airbag to inflate or not based on the detection.

Regarding claims 2-4, Saito et al. disclose the first electrode connection is a head electrode connection and being disposed at a pre-selected head height for a child in a child safety seat (figures 3 and 8).

Regarding claims 5-7, Saito et al. discloses the second electrode is a foot connection electrode and being disposed at a pre-selected foot height for a child in a child safety seat (figures 3 and 9).

Regarding claim 8, Saito et al. disclose the vehicle occupancy sensing system further comprising a non-switchable return ground connection (figures 1 and 5).

Regarding claims 12-14 and 17, Since Saito et al. discloses the controller (17) compares various threshold values TH1 to TH9 with a general expression R(i, j) and operative to negative determine occupant presence (empty), rear facing or front facing and the controller sends a signal to an airbag device (18) to not inflate in case of collision(figures 7-9 and 12, col. 12, lines 24-38), it would have been obvious to a person having ordinary skill in the art at the time the invention was made that the controller determines the occupancy characteristics by applying an occupancy test for the purpose of classifying the occupancy characteristics in order to not inflate airbag for that particular seat based on the determination.

Regarding claims 15-16, Since Saito et al. disclose the controller determines the occupancy characteristics and classifies them either rear facing of front facing (col. 12, lines 24-32), it would have been obvious to a person having ordinary skill in the art at the time the invention was made to know that the rear facing is for a child less than one year old and the front facing is for a child greater than one year old for the purpose of not inflating airbag for that particular seat based on the determination because sometimes airbag inflation may kill small child.

Regarding claim 18, Saito et al. disclose at least one of the first and second parameter readings being a load current reading (figure 3).

Regarding claim 19, Saito et al. disclose the controller determines a condition of unloaded (unoccupied, figure 7) and loaded (occupied, figures 8-10) from receiving load impact sum on both first and second electrodes.

Regarding claim 22, Saito et al. disclose the controller comparing first and second electrode readings with a predetermined threshold to determine various characteristics of occupancies (col. 12, lines 3-32). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to know that the controller compares the readings with a upper threshold and lower threshold for the purpose of ensuring that the readings is true.

Regarding claims 26-42, the claimed method steps would have been inherent in the product structure as stated in all claims above.

Regarding claims 43-50, refer to all claims above, Saito et al. disclose the instant claimed invention except for a machine readable medium encoded with instructions that

cause a vehicle electronic system to perform a method. The method steps involve a logic steps and processing steps that have been done by a micro-computer. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement such steps using computer executable software steps storable in a machine readable medium to execute and process all the steps.

Regarding claims 51-56, refer to claims 1-8 above.

5. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. in view of Cuddihy et al. (US 2004/0000992).

Regarding claims 10-11, Saito et al. disclose the vehicle sensing system disposed in an assistant driver's seat (1, figure 3) but being disposed in a rear seat as well (col. 9, lines 43-46). When the vehicle sensing system disposes in the rear seat, wherein the rear seat having two/three seating position and each seating position is separate one from each other by a selected belt-buckle dimension, it would have been obvious to a person having ordinary skill in the art that each seating position must includes detecting electrodes disposed therein for the purpose of detecting each occupant sitting therein in order to inflate airbag in case of accident to protect passengers in the rear. That limitation is found in Cuddihy et al., Cuddihy et al. teach the use of a vehicle occupancy sensor located in each rear seating position, wherein an occupancy sensor is located in each seating position and being separate by at least a pre-selected vehicle cabin feature distance that is a selected belt buckle dimension (figure 1, col. paragraph 12). Therefore, it would have been obvious to a person having

ordinary skill in the art at the time the invention was made to use the occupancy sensor as taught by Cuddihy et al. in the system as disclosed by Saito et al. for the purpose of avoiding interferences between two seating position that may lead to not inflate the airbag in case of accident.

Allowable Subject Matter

6. Claims 9 and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stanley et al. (US 6,517,106) and Gershenfeld et al. (US 6,066,954).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai T. Nguyen whose telephone number is (571) 272-2961. The examiner can normally be reached on Monday-Friday from 7:30am-5:00pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 2, 2006

Tai T. Nguyen
Examiner
Art Unit 2632